

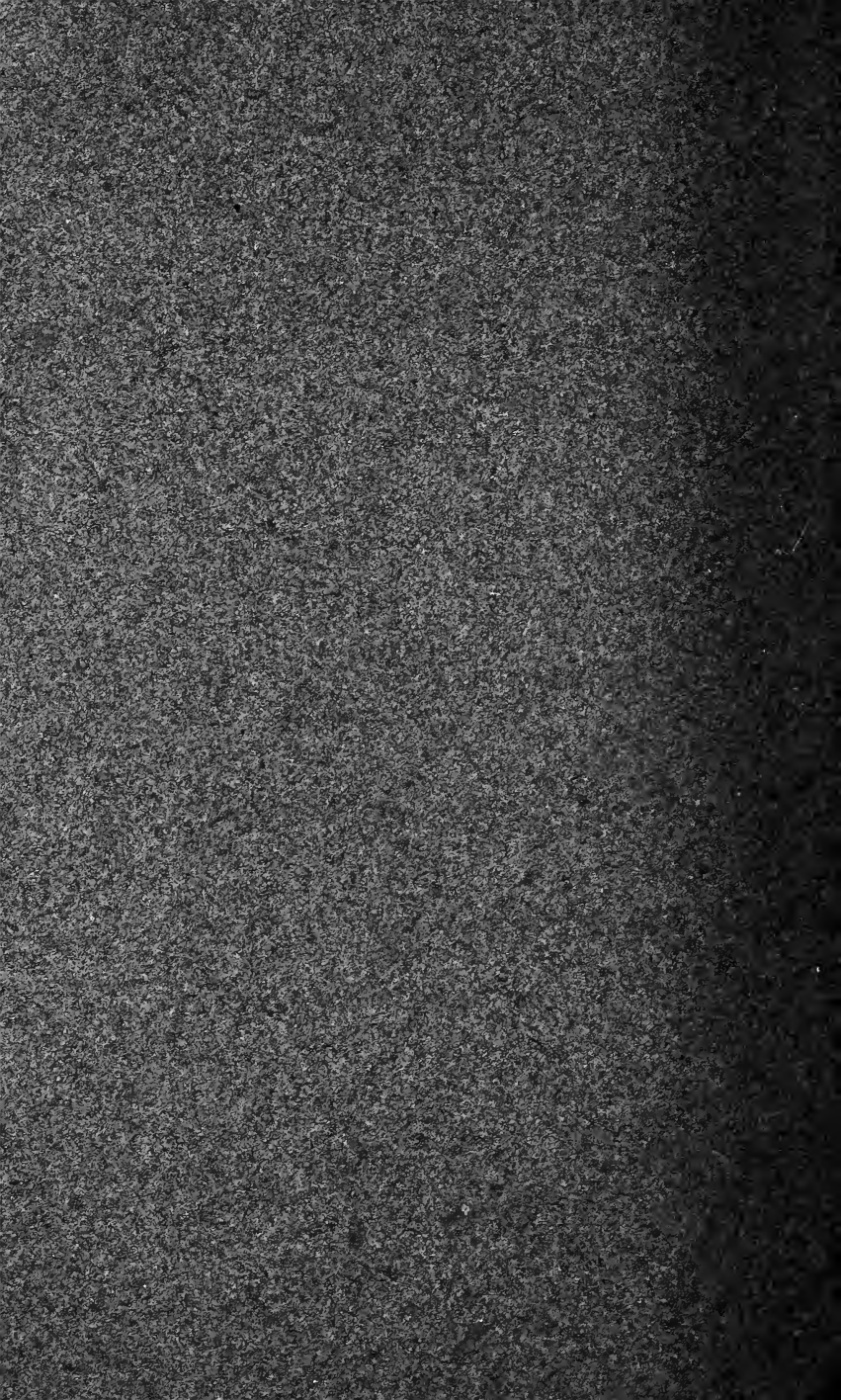
REPORT
OF THE
DEPARTMENT OF HEALTH
OF THE
PANAMA CANAL
FOR THE
MONTH OF OCTOBER, 1916

D. C. HOWARD

**Lieut. Colonel, Medical Corps, United States Army,
Chief Health Officer, Balboa Heights, Canal Zone**

Gift of the Panama Canal Museum

WASHINGTON
1916



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LETTER OF TRANSMITTAL.

CANAL ZONE,
Balboa Heights, November 10, 1916.

Lieut. Col. CHESTER HARDING,
*Acting Governor, The Panama Canal,
Balboa Heights, Canal Zone.*

SIR: I have the honor to submit the following report of the operations of the department of health for the month of October, 1916.

Very respectfully,

D. E. HOWARD,
Chief Health Officer.

GENERAL REMARKS.

The general health of employees and nonemployees in the Canal Zone and the terminal cities has continued good.

The outbreak of diphtheria of a mild type, in the terminal cities, which was noted in last month's report, has subsided. There were no fatal cases.

No disease of a quarantinable nature originated on or was brought to the Isthmus during the month.

VITAL STATISTICS.

The following statistics are based upon the number of names appearing on the rolls for the preceding month, which was 33,272.

The total number of admissions to hospitals and quarters was 784, a rate of 282.76,¹ as compared with 261.99 for the preceding month and 294.80 for the corresponding month of last year.

The total number of deaths from all causes was 19; of these 16 were from disease, giving a death rate of 5.77, as compared with 3.58 for the preceding month and 5.39 for the corresponding month of last year.

The constantly noneffective rate was 8.16, as compared with 8.88 for the preceding month and 10.56 for the corresponding month of last year.

The total admission rate for malaria, hospitals and quarters, was 13.71, as compared with 13.95 for the preceding month and 34.11 for the month of October last year. The constantly noneffective rate for malaria was 0.50, as compared with 0.67 for last month and 0.86 for the corresponding period of last year.

The diseases causing the highest admission rates to hospital, in the order of their numerical importance, were: (1) Venereal diseases, (2) malaria, (3) influenza, (4) diseases of the eyes and

¹ All morbidity and mortality rates are computed as equivalent annual per 1,000.

their annexa, and (5) lymphadenitis. These five diseases caused 29 per cent of all admissions to hospitals. Nine per cent of all admissions to hospitals was caused by malaria.

There were two admissions for typhoid fever during the month, giving an admission rate of 0.72, the same as for the preceding month. There were no admissions for typhoid during October, 1915.

EFFECTS OF RACE.

The admission rate to hospital and the death rate from disease, for black employees, were 66.82 and 5.84, respectively, as compared with 69.94 and 2.89 for last month and 96.38 and 5.84 for the corresponding month of last year. For white employees, the admission rate to hospital and the death rate from disease were 359.63 and 5.29, respectively, as compared with 222.33 and 7.94 for the preceding month and 272.96 and 2.57 for the corresponding month of last year.

The constantly noneffective rates were 15.10 for white and 7.06 for blacks.

The admission rate to hospitals and quarters for malaria was 7.93 for blacks and 47.40 for whites, as compared with a rate of 12 for blacks and 26.47 for whites for last month, and 24.20 for blacks and 95.28 for whites for the corresponding month of last year.

There was one death among American employees during the month, giving a rate of 2.85, as compared with 5.73 for last month and 5.74 for the month of October last year.

The admission rate to hospitals for disease was 319.32 for Americans, as compared with 180.34 for last month and 241.21 for the corresponding month of last year.

DEPORTATIONS.

There was one deportation accomplished during the month, in a colored employee, suffering from pulmonary tuberculosis.

CANAL ZONE.

EMPLOYEES AND NONEMPLOYEES.

The population of the Canal Zone, according to the last police census, taken in June, 1916, is 31,048. This included employees, nonemployees, and military garrisons residing or stationed within the Canal Zone limits. Among this population there were 28 deaths during the month of October, 25 of which were from disease, giving a death rate of 9.66, as compared with 10.82 for the preceding month and 13.10 for the corresponding month of last year.

Of the total deaths from disease, the percentage under 5 years of age was 32, as compared with 54 for last month.

There were 46 births reported, giving a rate of 17.78; of these, 6 were white and 40 colored.

There were 6 deaths of children under 1 year of age, 1 white and 5 colored, giving an infant mortality rate, based upon the number of births reported for the month, of 167 for white and 125 for colored children, with a general average of 130.

The percentage of stillbirths to total births was 2.

PANAMA CITY.

EMPLOYEES AND NONEMPLOYEES.

The population of the city is 60,778, among whom there were 156 deaths during the month of October; of these, 150 deaths were from disease, giving a rate of 29.62, as compared with 30.01 for the preceding month and 26.93 for the corresponding month of last year.

Of the total deaths from disease the percentage under 5 years of age was 47, as against 51 for last month.

The principal causes of death, as compared with last month, were as follows:

	Septem-ber.	October.
Tuberculosis (various organs).....	25	31
Diarrhea and enteritis (under 2 years).....	24	26
Brocho-pneumonia.....	19	16

There were 211 births reported, giving a rate of 41.66. There were 54 deaths under 1 year of age, giving an infant mortality rate, based on the number of births reported for the month, of 256.

The percentage of stillbirths to total births was 10.

COLON.

EMPLOYEES AND NONEMPLOYEES.

The population of the city is 24,693, among whom there were 64 deaths during the month of October; of these, 62 deaths were from disease, giving a rate of 30.13, as compared with 31.10 for the preceding month and 22.91 for the corresponding month of last year.

Of the total deaths from disease the percentage under 5 years of age was 43, as compared with 48 for the preceding month.

The principal causes of death, as compared with last month, were as follows:

	Septem-ber.	October.
Broncho-pneumonia.....	15	12
Tuberculosis (various organs).....	8	10
Organic diseases of the heart.....	4	7

There were 54 births reported, giving a rate of 25.83. There were 20 deaths under 1 year of age, giving an infant mortality rate, based on the number of births reported for the month, of 370.

The percentage of stillbirths to total births was 11.

DIVISION OF HOSPITALS.

ANCON HOSPITAL.

The average number of patients constantly in the hospital proper during the month was 416, as compared with 470 for last month and the same number for the corresponding period of last year. The average number of days' treatment per employee was 16.97. The daily per capita cost per patient in the hospital proper for September was \$1.51 gross.

The status of all the female nurses was changed from a subsisted to a nonsubsisted rate, and their salaries increased \$20 per month.

Fifty-two cases of malaria were admitted, as against 62 for September, 124 for August, and 143 for July.

Five deaths occurred from tuberculosis, as against 13 for September.

There were four deaths from pneumonia, the same number as for the preceding month.

Detailed statistics are shown in Table XIII.

Board of health laboratory.—During the month of October, work outside of routine, as follows, was performed at the laboratory:

The study of the methods of modifying petroleum to improve its larvicidal value has been continued.

It has been found that by a process of "cracking" the physical properties of the crude oil may be so changed as to materially increase its efficiency in the destruction of the mosquito larvæ. This process may be carried out by several different methods and it will be the object of further study to determine which method is the most effective and whether or not the method selected can be applied economically on a large scale.

Corozal Hospital.—During the month of October the average number of patients constantly cared for was 310, as compared with 301 for the preceding month and 257 for the corresponding month of last year.

During October there were 18 admissions, 3 deaths, 2 discharges, and 1 transfer. The daily per capita cost for September was \$0.45.

Detailed statistics are shown in Table XIII.

Chronic ward.—During the month there was 1 admission, no deaths, and 3 discharges. The average number of patients constantly cared for was 18.58. The daily per capita cost for September was \$0.36.

Detailed statistics are shown in Table XIII.

COLON HOSPITAL.

The average number of patients constantly in hospital was 38, as compared with 33 for the preceding month and 40 for the corresponding month of last year. The average number of days' treatment per employee was 8.79. The daily per capita cost per patient for September was \$2.69 gross.

The demolition of the old ward buildings has been completed, and most of the old material removed. Work on the new married-physicians' quarters has progressed well during the month and is estimated to be about 50 per cent completed.

Detailed statistics are shown in Table XIV.

PALO SECO LEPER ASYLUM.

The average number of patients constantly cared for during the month was 67.67, as compared with 69.30 for the preceding month and 57 for the corresponding month of last year. During October there were no admissions or discharges; 4 deaths occurred among the patients of the institution.

The daily per capita cost per patient for September was \$1. gross.

Construction work has been continued on the new ward buildings. The first building is now completed and work on the second is in progress.

Detailed statistics are shown in Table XV.

SANTO TOMAS HOSPITAL.

One thousand four hundred and fourteen patients were treated in the hospital during the month of October, as compared with 1,382 for the preceding month and 1,359 for the corresponding period of last year. The daily average number of patients treated was 440, as compared with 447 for the preceding month and 468 for the month of October last year. The total number of days' treatment was 13,657, as compared with 13,418 for the last month.

The number of deaths was 89, with tuberculosis of the lungs, congenital debility, and Bright's disease the chief causes, in the order named.

Thirteen cases of Dysentery were treated with 1 death, and 7 cases of pneumonia with 2 deaths. No typhoid cases were treated during the month.

The Panama Government has authorized the construction of an additional hospital ward for tuberculosis patients, for which plans are now being prepared. This will relieve, in part, unsatisfactory conditions as to overcrowding and mingling of tubercular patients with other patients in general wards. Additional quarters also will be constructed for the medical staff, and the building now occupied by doctors will be remodeled and used for isolation cases.

Detailed statistics are shown in Table XVI.

DISTRICT DISPENSARIES.

The dispensary having the highest admission rate for malaria was Gatun, with an average weekly percentage of 0.175. No malarial cases among employees were reported from either the Paraiso or Culebra-Empire districts during the month.

Detailed statistics are shown in Table IX.

SANITATION.

CANAL ZONE.

October has been a month of unusually heavy rainfall throughout the Isthmus, the total rainfall on the Pacific side having already exceeded the yearly average. The heavy and frequent rains, by flushing out the streams and drainage systems, have practically

eliminated mosquito breeding for the time. The malarial rate for the past month has been lower than ever before for October.

Very extensive hydraulic fills are in progress in several districts. In the Mount Hope district a fill is in progress between the Panama Railroad and the canal, south of the railroad station and north of the oil-tank area. An extensive fill at Paraiso has eliminated the low area known as Spanishtown, rendering necessary the demolition of all the old shacks in that neighborhood. The pond north of the corral at Paraiso will be filled in the near future, and extensive hydraulic fills are being made west of the canal between the Las Cascadas branch of the railroad and the canal. In the flats between Ancon and Corozal and between the old and new Corozal roads, the small ponds have been filled and the dredging division is about to commence work on filling the extensive swamps. All these fills will have a decided influence on sanitary conditions, and the health department is bearing a part of the expense of the work.

Mention was made in last month's report of the occurrence of a number of cases of dengue at the military posts on the west side of the canal, where the prevailing mosquito is the mansonina, and the question arose as to whether the mansonina transmitted dengue. Further investigation has shown that *Culex fatigans* is present in limited numbers in this area, and it is therefore possible to account for the transmission of dengue without assuming that mansonina is responsible.

The following contagious and infectious diseases were reported during the month:

Chickenpox.....	5	Malaria.....	40
Diarrhea.....	2	Measles.....	4
Diphtheria.....	5	Pneumonia.....	4
Dengue.....	17	Tuberculosis.....	7
Dysentery.....	4	Typhoid fever.....	1
Influenza.....	22	Whooping cough.....	2

PANAMA.

At the beginning of the month there were four cases of diphtheria remaining from September, and during the month there have been nine cases reported. All were hospitalized. Two bacillus carriers were discovered and four cases of the disease emanated from one household. No deaths have occurred in this immediate series; in fact, the cases have been unusually mild. Strict insistence upon hospital isolation has been observed and all premises placarded. All children in contact have been subjected to daily inspection. No new case has been reported since October 16.

The incidence of malaria continues to diminish. For the month, Santo Tomas reported 5 admissions for this disease and Ancon Hospital reported 5 admissions. Compared with the same month of 1915, there were 19 cases chargeable to this city, and in October, 1914, 254 cases.

The condemnation of undesirable stables is under way, proprietors being given from one to five months in which to vacate same. This is considered a forward step and ought to contribute no little toward the reduction of fly breeding in the city.

There are now 31 buildings in the course of erection. During October 103 permits were granted. Six buildings were condemned and three buildings were demolished on sanitary grounds.

The registration of midwives is proceeding slowly. To date 10 have reported, been found qualified, and awarded certificates. This high percentage among applicants thus far is explicable by their all having had experience over variable lengths of time. Several of them, indeed, have had hospital training in this subject. Our lists show 26 yet to be examined.

The following contagious and infectious diseases were reported during the month:

Beriberi.....	3	Measles.....	7
Chickenpox.....	5	Mumps.....	1
Diphtheria.....	7	Pellagra.....	1
Diphtheria carriers.....	2	Pneumonia.....	8
Dysentery.....	9	Tuberculosis.....	26
Leprosy.....	1	Typhoid fever.....	2
Malaria.....	10		

COLON.

The following contagious and infectious diseases were reported during the month:

Chickenpox.....	3	Malaria.....	20
Diphtheria.....	1	Pneumonia.....	3
Dysentery.....	2	Tuberculosis.....	4

QUARANTINE SERVICE.

The quarantine situation along the west coast of South America remains practically unaltered. We have had no reports of cases of yellow fever at Buenaventura, Colombia, for the past two months. Advices from Guayaquil, Ecuador, indicate moderate increase in cases and deaths in both plague and yellow fever. This is the beginning of the rainy season in that district, however, and the usual seasonal increase may be expected.

On the Atlantic side the usual careful precautions were taken with regard to arrivals from New York with reference to poliomyelitis. Eighteen suspects were detained for observation during the month.

During the month referred to yellow fever was officially reported at Barbados and Martinique. Ships from either of these islands rarely reach the Isthmus under six days.

One shipmaster was convicted and fined for violation of quarantine regulations.

Supervision was maintained over meat inspection at the Cristobal abattoir. Condemnations were mainly on account of bruises in cattle recently received from Colombia.

No cases of anthrax were reported during the month.

TABLE I.—ADMISSIONS, DEATHS, AND NONEFFECTIVE RATES FOR EMPLOYEES; DEATHS OF RESIDENTS OF PANAMA, COLON, AND THE CANAL ZONE.

ABSOLUTE NUMBERS.

	Number of employees.	Admissions to hospitals.			Deaths.			Noneffective from sickness.	
		Total.	Disease.	External causes.	Total.	Disease.	External causes.	Days treated.	Constantly noneffective.
<i>October, 1916.</i>									
White.....	4,538	151	136	15	4	2	2	2,125	68.55
Colored.....	28,734	245	160	85	15	14	1	6,292	202.96
Total.....	33,272	396	296	100	19	16	3	8,417	271.51
<i>September, 1916.</i>									
White.....	4,534	100	84	16	4	3	1	1,860	62.01
Colored.....	28,994	251	169	82	9	7	2	7,067	235.57
Total.....	33,528	351	253	98	13	10	3	8,927	297.58
<i>October, 1915.</i>									
White.....	4,660	126	106	20	3	1	2	2,491	80.34
Colored.....	28,759	318	231	87	17	14	3	8,456	272.76
Total.....	33,419	444	337	107	20	15	5	10,947	353.10

PROPORTIONATE NUMBERS.¹

<i>October, 1916.</i>									
White.....	4,538	399.29	359.63	39.66	10.58	5.29	5.29	.....	15.10
Colored.....	28,734	102.32	66.82	35.50	6.26	5.84	.42	.....	7.06
Total.....	33,272	142.82	106.76	36.06	6.85	5.77	1.08	.....	8.16
<i>September, 1916.</i>									
White.....	4,534	264.67	222.33	42.35	10.59	7.94	2.65	.....	13.68
Colored.....	28,994	103.88	69.94	33.93	3.72	2.89	.83	.....	8.12
Total.....	33,528	125.63	90.55	35.08	4.65	3.58	1.07	.....	8.88
<i>October, 1915.</i>									
White.....	4,660	324.46	272.96	51.50	7.72	2.57	5.15	.....	17.24
Colored.....	28,759	132.68	96.38	36.30	7.09	5.84	1.25	.....	9.48
Total.....	33,419	159.43	121.01	38.42	7.18	5.39	1.79	.....	10.56

¹ Annual average per 1,000.

TABLE I.—DEATHS OF RESIDENTS OF THE CITIES OF PANAMA, COLON, AND THE CANAL ZONE—Continued.

Place.	Popula- tion.	Deaths.			Annual average per 1,000.		
		Total.	Dis- ease.	External causes.	Total.	Dis- ease.	External causes.
<i>October, 1916.</i>							
Panama.....	60,778	156	150	6	30.80	29.62	1.18
Colon.....	24,693	64	62	2	31.10	30.13	.97
Canal Zone.....	31,048	28	25	3	10.82	9.66	1.62
Total.....	116,519	248	237	11	25.54	24.41	1.13
<i>September, 1916.</i>							
Panama.....	60,778	160	152	8	31.59	30.01	1.58
Colon.....	24,693	67	64	3	32.56	31.10	1.46
Canal Zone.....	31,048	34	28	6	13.14	10.82	2.32
Total.....	116,519	261	244	17	26.88	25.13	1.75
<i>October, 1915.</i>							
Panama.....	60,373	143	135	8	28.42	26.83	1.59
Colon.....	29,331	58	56	2	23.73	22.91	.82
Canal Zone.....	30,219	39	33	6	15.48	13.10	2.38
Total.....	119,923	240	224	16	24.01	22.41	1.60

TABLE II.—DEATHS BY AGE, COLOR, AND SEX.

	White.			Colored.			Yellow.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 year.....	9	1	10	38	31	69	....	1	1	47	33	80
1 to 4 years.....	1	2	3	17	9	26	....	....	....	18	11	29
5 to 10 years.....	....	....	....	2	2	4	....	....	....	2	2	4
11 to 20 years.....	....	1	1	3	8	11	....	....	....	3	9	12
21 to 30 years.....	4	....	4	18	15	33	....	....	....	22	15	37
31 to 40 years.....	3	3	6	18	10	28	3	....	3	24	13	37
41 to 50 years.....	5	1	6	9	5	14	3	....	3	17	6	23
51 to 60 years.....	2	1	3	10	5	15	....	....	....	12	6	18
61 to 70 years.....	1	....	1	1	....	1	....	....	....	2	....	2
71 to 80 years.....	....	....	....	1	2	3	....	....	....	1	2	3
81 to 90 years.....	....	....	....	....	....	....	1	....	1	1	....	1
91 to 100 years.....	....	....	....	1	....	1	....	....	....	1	....	1
Not stated.....	....	....	....	1	....	1	....	....	....	1	....	1
Total.....	25	9	34	119	87	206	7	1	8	151	97	248

TABLE III.—DEATHS BY NATIONALITY, OCTOBER.

	Employees.		Nonemployees.		Total		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	
Antigua.....			3	5	3	5	8
Barbados.....	5		24	13	29	13	42
Chile.....	1				1		1
China.....			7	1	7	1	8
Colombia.....			6	4	6	4	10
Costa Rica.....	1				1		1
Cuba.....			1		1		1
Demerara.....			1		1		1
Ecuador.....			1		1		1
France.....			1	1	1	1	2
Greece.....			1		1		1
Grenada.....	1		3		4		4
Guadeloupe.....	1		1		2		2
Guatemala.....			1		1		1
India.....			2		2		2
Italy.....	1		3	1	4	1	5
Jamaica.....	3		28	25	31	25	56
Martinique.....			8		8		8
Montserrat.....	1			2	1	2	3
Nevis.....	1				1		1
Nassau.....			1		1		1
Panama.....			31	40	31	40	71
Portugal.....			1		1		1
St. Lucia.....	1		1	1	2	1	3
St. Vincent.....	1			2	1	2	3
Spain.....	1		3		4		4
Trinidad.....				1		1	1
United States.....	1		3	1	4	1	5
Unknown.....			1		1		1
Total.....	19		132	97	151	97	248

TABLE IV.—DEATH RATE AMONG AMERICANS ON THE ISTHMUS CONNECTED WITH THE PANAMA CANAL.

	Number of deaths.	Annual average per 1,000.
White employees from the United States (4,209): External causes.....	1	2.85
White women and children from the United States (3,758): Disease.....	1	3.19
White employees and their families from the United States (7,967):		
Disease.....	1	1.51
External causes.....	1	1.51
Total.....	2	3.02
Total number of Americans on the Canal Zone, including soldiers and their families (16,619):		
Disease.....	1	.72
External causes.....	1	.72
Total.....	2	1.44

TABLE V.—CAUSES OF DEATHS OF EMPLOYEES OF THE PANAMA CANAL AND PANAMA RAILROAD CO.

	White.	Colored.	Total.
<i>Disease.</i>			
Estivo-autumnal malaria.....		1	1
Hodgkin's disease.....		1	1
Tuberculosis of the lungs.....		1	1
Disseminated tuberculosis.....		2	2
Rupture of the aorta.....		1	1
Aortic insufficiency.....	1		1
Organic disease of the heart.....		1	1
Chronic nephritis.....		4	4
General peritonitis.....		1	1
Lobar pneumonia.....	1	2	3
<i>External causes.</i>			
Railroad traumatism, accidental.....	2		2
Traumatism by other crushings, accidental.....		1	1
Total.....	4	15	19

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES) AND MILITARY, AND PLACES WHERE CHARGEABLE.

Disease.	Panama.		Colon.		Canal Zone.		Total.		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>General diseases.</i>									
Typhoid fever.....					1		1		1
Malarial fever, estivo-autumnal.....	1		2				2	1	3
Malarial fever, clinical.....	2							2	2
Whooping cough.....	1							1	1
Leprosy.....					1		1		1
Pellagra.....				1				1	1
Beriberi.....	3						3		3
Tuberculosis of the lungs.....	11	12	5	4	1	2	17	18	35
Acute miliary tuberculosis.....		1						1	1
Tuberculosis meningitis.....						1		1	1
Abdominal tuberculosis.....		1						1	1
Disseminated tuberculosis.....			1		1		2		2
Syphilis, tertiary.....		2						2	2
Syphilis, hereditary.....		1						1	1
Syphilis, period not stated.....	1						1		1
Cancer and other malignant tumors of the buccal cavity.....		1						1	1
Cancer and other malignant tumors of the stomach and liver.....	1						1		1
Cancer and other malignant tumors of the peritoneum, intestines, rectum.....		1						1	1
Cancer and other malignant tumors of other organs and of organs not specified.....		1	1				1	1	2
Scurvy.....	1						1		1
Hodgkin's disease.....			1					1	1
Alcoholism, acute.....	1						1		1

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES) AND MILITARY, AND PLACES WHERE CHARGEABLE—Continued.

Disease.	Panama.		Colon.		Canal Zone.		Total.		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>Diseases of the nervous system and of the organs of special sense.</i>									
Pneumococcus meningitis.....	1						1		1
Other diseases of the spinal cord.....					1		1		1
Cerebral hemorrhage, apoplexy.....	1	2	1				2	2	4
Epilepsy.....	1	1				1	1	2	3
<i>Diseases of the circulatory system.</i>									
Acute endocarditis.....	2						2		2
Organic diseases of the heart.....	4	2	4	3	2	1	10	6	16
Diseases of the arteries, atheroma, aneurysm, etc.....	1						1		1
Aneurysm.....	1						1		1
Arteriosclerosis.....	1						1		1
Embolism and thrombosis.....						1		1	1
Hemorrhage, other diseases of the circulatory system.....	1						1		1
<i>Diseases of the respiratory system.</i>									
Acute bronchitis.....	1		2	2			3	2	5
Chronic bronchitis.....		1		1				2	2
Broncho-pneumonia.....	9	10	8	4	1	2	18	16	34
Pneumonia (unqualified).....	1	1			1		2	1	3
Lobar pneumonia.....	1	2	2		1	1	4	3	7
Pleurisy.....	1						1		1
Empyema.....				1				1	1
Asthma.....	1						1		1
<i>Diseases of the digestive system.</i>									
Acute indigestion.....		1						1	1
Diarrhea and enteritis (under 2 years).....	18	6		5		1	18	12	30
Ankylostomiasis.....		1						1	1
Hernia, intestinal obstructions.....	2						2		2
Cirrhosis of the liver.....	1		1				2		2
Abscess of liver (unqualified).....	1						1		1
Cholecystitis.....	1						1		1
Simple peritonitis (nonpuerperal).....	1				1		2		2
Other diseases of the digestive system (cancer and tuberculosis excepted).....	1						1		1
<i>Nonvenereal diseases of the genito-urinary system and annexa.</i>									
Acute nephritis.....	3	1					3	1	4
Bright's disease (chronic nephritis).....	5	4	4	3	1		10	7	17
Pyelo-nephrosis.....	1			1			1	1	2
Stricture of the urethra, nonvenereal.....	1				1		2		2
<i>Diseases of the skin and of the cellular tissue.</i>									
Mycetoma.....	1						1		1
Other diseases of the skin and annexa.....		1						1	1
<i>Diseases of early infancy.</i>									
Congenital debility, icterus, and sclerema.....	1						1		1
Premature birth.....	1		1			1	2	1	3
Congenital debility.....			1		1		2		2
Malnutrition.....	2						2		2
Other diseases peculiar to early infancy (including various consequences of labor).....	4		1	1			5	1	6

TABLE VI.—CAUSES OF DEATHS OF CIVIL POPULATION (EMPLOYEES AND NONEMPLOYEES) AND MILITARY, AND PLACES WHERE CHARGEABLE—Continued.

Disease.	Panama.		Colon.		Canal Zone.		Total.		Grand total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>Old age.</i>									
Senility.....	2						2		2
<i>Affections produced by external causes.</i>									
Conflagration.....		1						1	1
Accidental drowning.....	2						2		2
Traumatism by fall.....		1			1		1	1	2
Traumatism by other crushings (vehicles, railroads, etc.).....	1		1		1		3		3
Railroad traumatism.....					1		1		1
Homicide by firearms.....				1				1	1
Homicide by other means.....	1						1		1
<i>Ill-defined diseases.</i>									
Cause of death not specified or ill-defined.....	2		1				3		3
Total.....	97	59	37	27	17	11	151	97	248
Stillbirths.....	15	7	6	1	0	1	21	9	30
Grand total.....	112	66	43	28	17	12	172	106	278

DEATHS OF NONRESIDENTS, OCTOBER, 1916.

Residence.	Nationality.	Color.	Sex.	Age.	Diagnosis.
Bocas del Toro.....	Panama.....	Black...	Male....	40	Pulmonary tuberculosis.
Interior of Panama.	Jamaica.....	do.....	do.....	31	Do.
Do.....	Panama.....	do.....	do.....	44	Do.
Colombia.....	Colombia.....	do.....	Female..	7	Chronic nephritis.
Interior of Panama.	do.....	do.....	Male....	26	Septicemia caused by cystitis.
Do.....	Panama.....	do.....	Female..	41	Measles.
Do.....	do.....	do.....	Male....	37	Pulmonary tuberculosis.
Do.....	Jamaica.....	do.....	do.....	80	Arteriosclerosis.
Do.....	Spain.....	White...	do.....	30	Hemoglobinuric fever.
U. S. S. Charleston.	United States.	do.....	do.....	24	Accidental fracture of skull caused by explosion of gasoline vapor.
Interior of Panama.	Jamaica.....	Black...	do.....	58	Pulmonary tuberculosis.
Do.....	Panama.....	do.....	do.....	50	Acute nephritis.
Do.....	do.....	do.....	do.....	28	Estivo-autumnal malaria.
Steamship (sailor).	do.....	do.....	do.....	23	Lobar pneumonia.

TABLE VII.—DISCHARGES AND DEATHS IN HOSPITALS

Diseases.	Employees.											
	Discharges.						Deaths.					
	White.				Black.		White.				Black.	
	Ameri- cans.		Euro- peans.				Ameri- cans.		Euro- peans.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Malformations.</i>												
Congenital malformations (stillbirth not included).....	1											
<i>Diseases of early infancy.</i>												
Newborn child.....												
Congenital debility, icterus, and sclerema.....												
Premature birth.....												
<i>Affections produced by ex- ternal causes.</i>												
Poisoning by food.....					1							
Other acute poisonings.....					1							
Venomous bites and stings.....					1							
Snake bites.....												
Burns (conflagration ex- cepted).....					1							
Traumatism by firearms.....												
Traumatism by cutting or piercing instruments.....	3				7							
Traumatism by fall.....					7							
Traumatism in mines and quarries.....					1							
Traumatism by machines.....	1				2							
Traumatism by other crush- ings (vehicles, railroads, landslides, etc.).....					19							
Fractures (cause not speci- fied).....			2		5							
Dislocations.....					1							
Sprains.....					4							
Other external violence.....	6		2		23							
<i>Ill-defined diseases.</i>												
Infections of undetermined origin.....	1				3							
No disease.....	2				3							
Total.....	97	7	21		230	2			1		13	

OF THE PANAMA CANAL FOR OCTOBER, 1916—Continued.

Nonemployees.										Nonresidents.								Total discharges.	Total deaths.
Discharges.					Deaths.					Discharges.				Deaths.					
W.			B.		W.			B.		W.		B.		W.		B.			
Sol-d'rs.	Others.		M.	F.	Sol-d'rs.	Others.		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
M.	M.	F.	M.	F.	M.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
4	4																	9	
	4	8	2	4														18	
			1					1										1	1
	1	1																2	
			1															2	
	1			2														3	
			1															1	
1				1						1								4	
2	1																	3	
2	1											1						14	
									1									7	1
																		1	
																		3	
	2	1																22	
5	1	1	2	1						1								18	
																		1	
																		4	
4		1	1															4	
																		37	
			2	2								1						9	
4	1	8		3														21	
194	40	98	49	104		2	2	7	10	21	1	2						866	35

TABLE VIII.—CONSOLIDATED

[A= White Americans. F=

	Remaining Oct. 1.			Admitted.			Died.		
	A.	F.	B.	A.	F.	B.	A.	F.	B.
ANCON HOSPITAL.									
Panama Canal employees.....	12	11	113	81	15	146	.....	.....	5
Panama R. R. employees.....	3	1	43	14	4	42	.....	1	4
Other pay cases.....	98	24	51	305	20	112	1	2	11
Charity patients.....	8	.....	27	14	2	35	.....	.....	3
Total.....	121	36	234	414	41	335	1	3	23
<i>Insane department.</i>									
Panama Canal employees.....	.....	.....	5	.....	.....	1	.....	.....	.....
Panama R. R. employees.....	.....	.....	3	.....	.....	.....	.....	.....	.....
Panama pay cases.....	2	27	186	.....	5	6	.....	.....	2
Other pay cases.....	4	5	2	2	.....	1	.....	1	.....
Charity patients.....	3	8	60	.....	1	2	.....	.....	.....
Total.....	9	40	256	2	6	10	.....	1	2
Grand total.....	130	76	490	416	47	345	1	4	25
<i>Corozal farm.</i>									
Panama Canal employees.....	.....	10	51	.....	2	2	.....	.....	.....
<i>Chronic ward.</i>									
Charity patients.....	.....	.....	19	.....	.....	1	.....	.....	.....
COLON HOSPITAL.									
Panama Canal employees.....	1	.....	7	17	4	26	.....	.....	.....
Panama R. R. employees.....	2	2	11	13	3	30	.....	.....	4
Panama pay cases.....	.....	.....	1	.....	2	8	.....	.....	.....
Other pay cases.....	3	2	1	16	12	12	.....	.....	1
Charity patients.....	1	.....	1	2	.....	1	.....	.....	.....
Total.....	7	4	21	48	21	77	.....	.....	5
PALO SECO LEPER ASYLUM.									
Panama pay cases.....	.....	2	40	.....	.....	.....	.....	.....	2
Charity patients.....	.....	2	26	.....	.....	.....	.....	.....	2
Total.....	.....	4	66	.....	.....	.....	.....	.....	4
GRAND TOTAL.									
Panama Canal employees.....	13	21	176	98	21	175	.....	.....	5
Panama R. R. employees.....	5	3	57	27	7	72	.....	1	8
Panama pay cases.....	2	29	227	.....	7	14	.....	.....	4
Other pay cases.....	105	31	54	323	32	125	1	3	12
Charity cases.....	12	10	133	16	3	39	.....	.....	5
Total.....	137	94	647	464	70	425	1	4	34

HOSPITAL REPORT.

White foreign. B=Blacks.]

Discharged.			Transferred.			Remaining Oct. 31.			Average number constantly sick.			
A.	F.	B.	A.	F.	B.	A.	F.	B.	American.	Foreign.	Black.	Total.
71	15	149				22	11	105	20.87	8.39	112.68	141.94
10	1	35				7	3	45	6.42	1.32	46.32	54.06
289	23	98	1			112	19	53	107.26	22.90	54.94	185.10
14	1	23				8	1	35	6.06	.42	28.74	35.22
384	40	305	1		3	149	34	238	140.61	33.03	242.68	416.32
								6			5.26	5.26
		1						2			2.87	2.87
		1			1	2	32	188	2.00	30.87	187.33	220.20
1						5	4	3	4.23	4.06	2.10	10.39
		1			1	3	9	60	3.00	8.10	59.80	70.90
1		3			2	10	45	259	9.23	43.03	257.36	309.62
385	40	308	1		5	159	79	497	149.84	76.06	500.04	725.94
	2	1					10	52		9.94	52.03	61.97
					3			17			18.58	18.58
14	1	15			6	4	3	12	3.10	1.25	5.97	10.32
9	4	23	1	1	5	5		9	5.25	1.06	9.81	16.12
		1		1	8		1			.09	1.07	1.16
11	7	6	1	3	5	7	4	1	4.38	2.90	1.39	8.67
3		1			1				1.13		.22	1.35
37	12	46	2	5	25	16	8	22	13.86	5.30	18.46	37.62
							2	38		2.00	39.32	41.32
							2	24		2.00	24.35	26.35
							4	62		4.00	63.67	67.67
85	18	165			6	26	24	175	23.97	19.58	175.94	219.49
19	5	59	1	1	6	12	3	56	11.67	2.38	59.00	73.05
		2		1	9	2	35	226	2.00	32.96	227.72	262.68
301	30	104	2	3	6	124	27	57	115.87	29.86	58.43	204.16
17	1	25			6	11	12	136	10.19	10.52	131.69	152.40
422	54	355	3	5	33	175	101	650	163.70	95.30	652.78	911.78

Number of employees remaining in hospitals:

White..... 65

Black..... 231

Total..... 296

TABLE IX.—CONSOLIDATED DISPENSARY REPORT.
EMPLOYEES TREATED IN QUARTERS.

Station.	Re- maining Oct. 1.		Ad- mitted.		Died.		Dis- charged.		Trans- ferred.		Re- maining Oct. 31.		Days lost.		
	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	W.	B.	Total.
Ancon.....	3	3	89	3	.....	.....	85	5	2	1	5	.....	150	43	193
Balboa.....	3	1	112	7	.....	.....	102	6	8	2	5	.....	207	15	222
Pedro Mi- guel.....	.....	.....	13	.....	.....	.....	13	.....	.....	.....	.....	.....	25	.....	25
Paraiso.....	.....	.....	7	.....	.....	.....	7	.....	.....	.....	.....	.....	18	.....	18
Gamboa.....	.....	.....	1	2	.....	.....	.....	2	1	.....	.....	.....	5	5	10
Gatun.....	.....	.....	17	4	.....	.....	15	4	1	.....	.....	.....	49	7	56
Colon.....	10	22	73	89	.....	.....	77	96	.....	.....	.....	.....	6	15	206
Total..	16	26	312	105	.....	.....	299	113	12	3	17	15	660	622	1,282

ALL CASES TREATED BUT NOT EXCUSED.

Station.	Employees.			Nonemployees.			Total.		
	White.	Black.	Total.	White.	Black.	Total.	White.	Black.	Total.
Ancon.....	2,681	4,164	6,845	1,916	2,933	4,849	4,597	7,097	11,694
Balboa.....	3,052	3,548	6,600	1,703	907	2,610	4,755	4,455	9,210
Pedro Miguel..	905	1,257	2,162	965	504	1,469	1,870	1,761	3,631
Paraiso.....	994	2,685	3,679	826	917	1,743	1,820	3,602	5,422
Gamboa.....	58	191	249	33	367	400	91	558	649
Gatun.....	229	1,155	1,384	599	1,043	1,642	838	2,198	3,036
Colon.....	1,019	3,364	4,383	943	939	1,882	1,962	4,303	6,265
Total...	8,938	16,364	25,302	6,985	7,610	14,595	15,933	23,974	39,907

CONSOLIDATED ADMISSION REPORT.

	White.	Black.	Total.
Total admissions to hospitals, excluding Corozal farm and chronic ward.....	532	422	954
Total admissions of employees to quarters.....	312	105	417
Total.....	844	527	1,371
Less number of patients transferred between hospitals and from quarters to hospitals, whose admissions are duplicated in above figures.....	20	33	53
Net admissions to hospitals and quarters.....	824	494	1,318
EMPLOYEES.			
Employees admitted to hospitals.....	151	245	396
Employees admitted to quarters.....	312	105	417
Total.....	463	350	813
Less number transferred between hospitals, and from quarters to hospitals, whose admissions are duplicated in above figures.....	14	15	29
Net admissions of employees to hospitals and quarters.....	449	335	784
Annual average per thousand of admissions of employees to hospitals and quarters.....	1,187.30	139.90	282.76

TABLE IX.—CONSOLIDATED DISPENSARY REPORT—Continued.

CONTAGIOUS AND INFECTIOUS DISEASES REPORTED DURING THE MONTH OF OCTOBER, 1916.

Disease.	Panama.	Colon.	Canal Zone.	Total.
Beriberi.....	3			3
Chicken pox.....	5	3	5	13
Diarrhea.....			2	2
Diphtheria.....	7	1	5	13
Dengue.....			17	17
Dysentery.....	9	2	4	15
Influenza.....			22	22
I eprosy.....	1			1
Malaria.....	10	20	40	70
Measles.....	7		4	11
Mumps.....	1			1
Pellagra.....	1			1
Pneumonia.....	8	3	4	15
Tuberculosis.....	26	4	7	37
Typhoid fever.....	2		1	3
Whooping cough.....			2	2

TABLE X.—NUMBER OF EMPLOYEES CONSTANTLY SICK IN HOSPITALS AND QUARTERS.

	White.	Colored.	Total.
Hospitals:			
Ancon Hospital.....	37.00	167.13	204.13
Colon Hospital.....	10.66	15.78	26.44
Total.....	47.66	182.91	230.57
Quarters:			
Ancon.....	4.84	1.38	6.22
Balboa.....	6.67	.48	7.15
Pedro Miguel.....	.41		.41
Paraiso.....	.58		.58
Gamboa.....	.16	.16	.32
Gatun.....	1.58	.23	1.81
Colon.....	6.65	17.80	24.45
Total.....	20.89	20.05	40.94
<hr/>			
	Hospitals.	Quarters.	Total.
Average number of employees constantly sick:			
White.....	47.66	20.89	68.55
Colored.....	182.91	20.05	202.96
Total.....	230.57	40.94	271.51
Average number of employees constantly sick per 1,000:			
White.....	10.50	4.60	15.10
Colored.....	6.36	.70	7.06
Total.....	6.93	1.23	8.16

TABLE XI.—AVERAGE LENGTH OF STAY IN HOSPITALS OR QUARTERS FOR EACH ADMISSION OF SICK EMPLOYEE.

	White.	Black.	Total.
Hospitals:			
Ancon Hospital.....	9.71	20.45	16.97
Colon Hospital.....	8.37	9.03	8.79
Quarters:			
Ancon.....	2.18	14.08	2.96
Balboa.....	1.84	4.25	2.01
Pedro Miguel.....	1.92	.....	1.92
Paraiso.....	2.57	.....	2.57
Gamboa.....	5.00	2.50	3.33
Gatun.....	3.06	1.75	2.80
Colon.....	2.71	7.91	5.58

TABLE XII.—FINANCIAL STATEMENT, DEPARTMENT OF HEALTH.

	September, 1916.	August, 1916.	September, 1915.
Administration: Chief health office.....	\$817.23	\$567.28	\$842.75
Hospital division:			
Ancon Hospital.....	26,129.16	26,104.63	21,639.52
Board of health laboratory.....	2,217.44	1,916.01	1,789.70
Corozal farm.....	6,475.28	6,216.38	5,326.59
Chronic ward.....	215.26	183.39	186.84
Colon Hospital.....	4,496.17	4,292.20	3,563.20
Palo Seco Leper Asylum.....	1,979.55	1,665.69	1,876.03
Santo Tomas Hospital.....	888.75	1,136.48	878.43
Medical storehouse.....	674.21	653.16	1,332.01
Reserve for new tools.....	2,095.77	2,154.69	.....
	45,171.59	44,322.63	36,592.32
District dentists.....	28.39	45.43	2.53
Dispensaries:			
Naos Island.....	.....	.....	124.02
Balboa.....	1,206.82	1,195.21	974.87
Corozal.....	.....	.....	514.97
Pedro Miguel.....	423.94	443.20	450.75
Paraiso.....	552.51	587.82	651.94
Culebra.....	.....	.....	111.21
Gamboa.....	151.53	88.50	144.12
Gatun.....	674.50	575.14	677.55
Toro Point.....	.....	.....	34.78
	3,037.69	2,935.30	3,686.74
Sanitary division:			
General inspector.....	50.00	50.00	50.00
Health office, Panama.....	3,072.29	3,654.55	3,995.62
Street cleaning, Panama.....	¹ 4,257.84	4,290.43	4,446.90
Health office, Colon.....	2,999.06	2,987.65	2,553.85
Street cleaning, Colon.....	² 2,139.22	2,175.90	2,122.73
	12,518.41	13,158.53	13,169.10

¹ \$3,166.67 per month charged to Republic of Panama for garbage disposal and street cleaning.

² One-half the expense of garbage disposal and street cleaning, Colon, charged to Republic of Panama.

TABLE XII.—FINANCIAL STATEMENT, DEPARTMENT OF HEALTH—
Continued.

	September, 1916.	August, 1916.	September, 1915.
Zone sanitation:			
Ancon.....	\$1,960.29	\$2,091.89	\$2,388.63
Balboa.....	1,366.01	1,712.86	1,313.74
Corozal.....	1,309.32	658.11	1,464.29
Pedro Miguel.....	3,639.33	5,251.26	3,303.90
Culebra.....			18.00
Frijoles.....	75.75	76.13	99.33
Gatun.....	3,933.83	4,057.67	3,012.21
Cristobal-Mount Hope.....	2,107.26	2,290.10	2,852.66
	26,910.20	29,296.55	27,621.86
Quarantine division:			
Chief quarantine office.....	171.39	188.35	341.48
Balboa-Panama.....	2,041.75	2,041.12	2,001.01
Colon-Cristobal.....	3,411.81	3,234.99	3,047.92
	5,624.95	5,464.46	5,390.41
RECAPITULATION.			
Chief health office.....	817.23	567.28	872.74
Hospital division.....	45,171.59	44,322.63	36,592.32
Dispensaries.....	3,037.69	2,935.30	3,686.74
Sanitary division.....	26,910.20	29,296.55	27,621.86
Quarantine division.....	5,624.95	5,464.46	5,390.41
Total.....	81,561.66	82,586.22	74,134.07

TABLE XIII.—ANCON HOSPITAL. -
REPORT OF NATIONALITY OF PATIENTS TREATED.

	Total num- ber treated.	American.		Other nations.	
		White.	Black.	White.	Black.
Hospital:					
Panama Canal employees.....	377	93		25	259
Panama R. R. employees.....	107	17		5	85
Other pay patients.....	610	403		14	163
Charity patients.....	86	22		2	62
Total.....	1,180	535		76	569
Asylum:					
Panama Canal employees.....	6				6
Panama R. R. employees.....	3				3
Panama Government cases.....	226	2		32	192
Other pay patients.....	14	6		5	3
Charity patients.....	74	3		9	62
Total.....	323	11		46	266
Grand total.....	1,503	546		122	835
Soldiers.....	289	289			
Chronics.....	20				20
Farm (cripples).....	65			12	53

TABLE XIII.—ANCON HOSPITAL—Continued.

REPORT OF DAYS LOST IN HOSPITAL.

	Total number treated.	American.		Other nations.	
		White.	Black.	White.	Black.
Hospital:					
Panama Canal employees	4,400	647	.....	260	3,493
Panama R. R. employees	1,676	199	.....	41	1,436
Other pay patients.....	5,738	3,325	.....	710	1,703
Charity patients.....	1,092	188	.....	13	891
Total.....	12,906	4,359	.....	1,024	7,523
Asylum:					
Panama Canal employees	163	.....	.....	.....	163
Panama R. R. employees	89	.....	.....	.....	89
Panama Government cases.....	6,826	62	.....	957	5,807
Other pay patients.....	322	131	.....	126	65
Charity patients.....	2,198	93	.....	251	1,854
Total.....	9,598	286	.....	1,334	7,978
Grand total.....	22,504	4,645	.....	2,358	15,501
Soldiers.....	2,765	2,765	.....	.....	.....
Chronics.....	576	.....	.....	.....	576
Farm (cripples).....	1,921	.....	.....	308	1,613

Average cost per subsistence per day, \$0.2867.

WARD LABORATORY REPORT.

Blood examinations (total number).....	484
Estivo-autumnal.....	38
Tertian.....	11
Differential counts.....	5
Hemoglobin estimations.....	149
Leucocyte counts.....	40
Red-blood counts.....	1
Stool examinations (total number).....	517
Ameba.....	2
Ascaris lumbricoides.....	4
Bilharzia.....	1
Ciliated nomads.....	9
Guaiac tests.....	19
Pus and blood.....	30
Stronglodes.....	3
Tenia saginata dispar (ova).....	1
Tricocephalus dispar.....	6
Uncinaria (ova).....	18
Urine examinations (total number).....	1,743
Albumen.....	275
Bile.....	4
Casts.....	411
Ciliated nomads.....	3
Epithelia.....	1,015
Guaiac tests.....	109
Hemin crystals.....	8
Indicon.....	74
Acetone.....	1
Pus.....	869
Pus and blood.....	193
Sugar (positive, 3; negative, 22).....	25
Sputum examinations (total number).....	290
Positive for tubercle bacilli.....	35
Smear examinations (total number).....	14
Urethral.....	7
Vaginal.....	9
Spinal fluid.....	10

TABLE XIII.—ANCON HOSPITAL—Continued.

REPORT OF SURGICAL OPERATIONS.

	Number.	Died.
Amputations: Digits, multiple.....	2	.....
Operations on bones: Ostelectomy.....	2	.....
Adenectomy:		
Inguinal, single.....	15	.....
Femoral.....	1	.....
Herniotomy: Ventral.....	1	.....
Genito-urinary tract:		
Urethrotomy, external.....	2	1
Prostatectomy.....	1	.....
Varicocele, radical cure.....	1	.....
Hydrocele, single, radical cure.....	1	.....
Orchidectomy.....	1	.....
Epididymotomy.....	1	.....
Curettagc uteri.....	5	.....
Obstetrical: High forceps.....	1	.....
Rectum:		
Hemorrhoids, radical cure.....	12	.....
Fistula in ano, excision of.....	3	.....
Laparotomy:		
For intestinal obstruction.....	1	.....
Exploratory.....	3	1
Gastroenterostomy.....	1	.....
Appendectomy.....	14	.....
Appendectomy with local peritonitis.....	4	.....
Cholecystectomy.....	1	.....
Abscess of liver, thoraco-hepatotomy for.....	1	.....
Pan-hysterectomy.....	1	.....
Supravaginal hysterectomy.....	2	.....
Hysteromyomectomy.....	3	.....
Salpingectomy, single.....	2	.....
Salpingo-oophorectomy.....	3	.....
Suspensio-uteri.....	3	.....
Various other major operations.....	3	.....
Various other minor operations.....	93	.....
Total.....	184	2

REPORT OF OPERATIONS, EYE AND EAR CLINIC.

Tonsillectomy and adenoidectomy.....	24
Adenoidectomy only.....	6
Submucous resections.....	12
Turbinectomy.....	6
Pterygium transplantations.....	7
Plastic on nose.....	2
Total.....	57
Refractions.....	90

REPORT OF OUT-PATIENT DEPARTMENT.

Clinic.	Total visits.	New cases.	Pay cases.	Prescriptions.
Medical.....	266	171	18	281
Surgical.....	238	110	10	37
Eye and ear.....	526	198	0	52
Total.....	1,030	479	28	370

TABLE XIII.—ANCON HOSPITAL—Continued.

MONTHLY VACCINATION REPORT.

No vaccinations during October.

BOARD OF HEALTH LABORATORY.

Bacteriological examination of:	
Blood cultures (3 positive for <i>B. typhosus</i>).....	20
Throat cultures.....	100
Urines.....	47
Stools.....	27
Sputum.....	3
Phenol coefficient determination of Bacili-Kil.....	1
Pathological fluids, exudates, etc.....	5
Smears, gonococcus.....	4
Cultures of autopsies.....	4
Leper suspects.....	2
Dairy milk from Corozal.....	27
Wassermann reactions.....	958
Agglutination reactions.....	1
Autogenous vaccines prepared.....	3
Antityphoid vaccinations.....	3
Animal inoculations.....	10
Dark field examinations.....	8
Chemical examinations of:	
Mothers' milk.....	
Urine.....	3
Milk for supply department.....	19
Bacili-Kil.....	1
Fat determinations of milk from Corozal farm.....	1
Cuban rum.....	7
Powder for identification.....	1
Oil of Cedarwood.....	3
Butter for moisture.....	1
Test meals.....	1
Spinal fluids—	
Butyric acid test.....	16
Ammonium sulphate test.....	16
Phenol test.....	16
Colloidal gold test.....	2
Pathological tissues prepared (paraffin 434, frozen 5).....	439
Test meals, pathological examination.....	2
Placental smears.....	62
Spinal fluid.....	1
Autopsies performed.....	29
Animals autopsied.....	28
Filaria identification.....	1
Dog under observation.....	1
Rats examined (<i>mus musculus</i> , 441; <i>mus norwegicus</i> , 833; <i>mus alexandrinus</i> 3; <i>mus rattus</i> , 171).....	1,425
Bodies embalmed.....	3
Interments at Corozal.....	9
Taken to Panama.....	2
Taken to Gatun.....	1
Cremations.....	27

TABLE XIII.—ANCON HOSPITAL—Continued.
 MOSQUITOES IDENTIFIED AT THE BOARD OF HEALTH LABORATORY.

Stations.	<i>Anopheles albimanus.</i>	<i>Anopheles tarsimaculata.</i>	<i>Anopheles pseudopunctipennis.</i>	<i>Anopheles apicimacula.</i>	<i>Anopheles malefactor.</i>	<i>Mansonia titillans.</i>	<i>Mansonia fasciolatus.</i>
Ancon.....	2	.....	.....	.....	.....	11	.....
Balboa.....	.....	.....	.....	.....	.....	91	.....
Corozal district.....	11	.....	.....	.....	.....	204	.....
Corozal post.....	55	.....	1	1	.....	33	.....
Pedro Miguel.....	6	.....	2	.....	.....	410	.....
Pedro Miguel, railroad station.....	19	.....	1	.....	.....	1,887	.....
Paraiso.....	1	.....	.....	.....	.....	222	.....
Red Tank.....	5	.....	.....	.....	.....	94	.....
Miraflores.....	.....	.....	.....	.....	.....	7	.....
Rio Grande.....	2	.....	.....	.....	.....	1,088	.....
Lirio and Cerio.....	1	.....	.....	.....	.....	1,046	.....
Dredges, Culebra Cut.....	1	.....	.....	.....	.....	699	.....
Gamboa.....	3	.....	.....	.....	.....	2,768	.....
Gatun.....	134	.....	.....	1	.....	721	9
New Gatun.....	204	9	.....	.....	6	471	5
Frioles.....	859	28	.....	.....	.....	7,666	3
Monte Lirio.....	141	1	.....	.....	.....	1,160	4
Barracks, Cristobal.....	26	5	.....	.....	.....	.....	.....
Silver married quarters.....	2	.....	.....	.....	.....	8	.....
Mount Hope village.....	19	3	.....	.....	.....	142	9
Colon Hospital.....	11	4	.....	.....	.....	439	.....
Panama Railroad cars, Cristobal.....	.....	.....	.....	.....	.....	.....	.....
Other places, Cristobal.....	.....	.....	.....	.....	.....	.....	.....
Colon district.....	2	1	.....	.....	.....	1	.....
Camp Gaillard.....	.....	.....	.....	.....	.....	2,311	.....
Empire.....	.....	.....	.....	.....	.....	596	.....
Camp E. S. Otis.....	.....	.....	.....	.....	1	4,217	.....
Fort Randolph.....	33	3	.....	.....	.....	1	2
Fort Sherman.....	11	2	.....	.....	1	1,108	.....
Fort Grant.....	.....	.....	.....	.....	.....	.....	.....
Total.....	1,548	56	4	2	8	27,401	35

TABLE XIII.—ANCON HOSPITAL—Continued.

Stations.	Culex and allied genera.	Stegomyia.	Aedes taeniorhynchus.	Wyeomyia.	Joblotia digitatus.	Psorophora posticcatus.	Total.
Ancon.....	176	1		3			193
Balboa.....	405	1	1				498
Corozal district.....	2						217
Corozal post.....	24		2	2			118
Pedro Miguel.....	6						424
Pedro Miguel, railroad station.....	2						1,909
Paraiso.....	7			1			231
Red Tank.....	1						100
Miraflores.....							7
Rio Grande.....				1			1,091
Lirio and Cerio.....	1						1,048
Dredges, Culebra Cut.....	77	274					1,051
Gamboa.....	1	1					2,773
Gatun.....	32			1			898
New Gatun.....	38			5			738
Prijoles.....	9	1		10			8,576
Monte Lirio.....							1,306
Barracks, Cristobal.....	3,314			1			3,346
Silver married quarters.....	359						369
Mount Hope village.....	261			1			435
Colon Hospital.....	1,820			1	14		2,289
Panama Railroad cars, Cristobal.....	147						147
Other places, Cristobal.....							
Colon district.....	1,018						1,022
Camp Gaillard.....	42			33	6	1	2,393
Empire.....	5			7			608
Camp E. S. Otis.....	4			6			4,228
Fort Randolph.....	1						40
Fort Sherman.....	514					16	1,654
Fort Grant.....	23	1	45				69
Total.....	8,289	278	48	72	6	31	37,778

COROZAL HOSPITAL.

STATEMENT OF COMMITMENTS, DISCHARGES, AND DEATHS.

COMMITMENTS.

	Male.	Female.
From Canal Zone:		
First admission.....	4	1
Fifth admission.....	1	
From Panama Government:		
First admission.....	6	5
Third admission.....		1
Total.....	11	7

COROZAL HOSPITAL—Continued.
STATEMENT OF COMMITMENTS, DISCHARGES, AND DEATHS—Continued.
DISCHARGES.

	Well.		Improved.		Unimproved.	
	Male.	Female.	Male.	Female.	Male.	Female.
Barbados.....			2			
Colombia.....					1	1
Panama.....				2		
Total.....			2	2	1	

!Transferred to Ancon Hospital for surgical treatment.

DEATHS.

Medical diagnosis.	Mental diagnosis.	Male.	Female.
Carcinoma of bladder.....	Psychosis undetermined.....		1
Syphilis, tertiary.....	Syphilis.....		1
Pneumococcic meningitis; syphilis, tertiary.....	do.....	1	

TABLE XIV.—COLON HOSPITAL.

NATIONALITY.

	White American.	White foreign.	Black.	Total.
Panama Canal employees.....	18	4	33	55
Panama R. R. employees.....	15	5	41	61
Panama pay cases.....		2	9	11
Other pay cases.....	19	14	13	46
Charity cases.....	3		2	5
Total.....	55	25	98	178

LABORATORY REPORT.

Blood examinations.....	115
Estivo-autumnal.....	13
Tertian.....	3
White blood counts.....	18
Red blood counts.....	2
Hemoglobin.....	4
Stool examinations.....	25
Uncinaria Americana.....	1
Urine examinations.....	191
Albumen.....	78
Pus.....	32
Casts.....	45
Blood.....	16
Sputum examinations.....	56
Positive for tubercle bacilli.....	5
Smear examination.....	3
Positive for gonorrhoea.....	2
Throat cultures examined.....	4
Positive for diphtheria.....	1
Spinal fluid examined.....	1

TABLE XIV.—COLON HOSPITAL—Continued.

SURGICAL OPERATIONS.

Adenectomy: Inguinal, single.....	1
Herniotomy:	
Inguinal, single.....	3
Inguinal, double.....	3
Genito-urinary tract:	
Hydrocele, single, radical cure.....	1
Curetage uteri.....	1
Rectum: Hemorrhoids, radical cure.....	2
Laparotomy:	
Appendectomy.....	1
Minor operations, various.....	5
Minor operations, various (dispensary).....	142

TABLE XV.—PALO SECO LEPER ASYLUM.

NATIONALITY OF PATIENTS.

Class.	Number treated.		Americans.		Others.	
	White.	Black.	White.	Black.	White.	Black.
Pay cases.....	2	40	.....	.....	2	40
Charity cases.....	2	26	.....	.....	2	26
Total.....	4	66	.....	.....	4	66

Cost of subsistence per patient per day, \$0.24.

TABLE XVI.—SANTO TOMAS HOSPITAL.

	Remain- ing Oct. 1.	Ad- mitted.	Dis- charged.	Died..	Remain- ing Oct. 31.
Pay cases.....	37	63	81	1	18
Charity cases.....	419	895	805	88	421
Total.....	456	958	886	89	439

Average number of patients constantly sick..... 440
 Total number of days' treatment..... 13,657
 Average number of days' treatment for each patient..... 10
 Cost of subsistence per patient per day..... \$0.39

NATIONALITY.

Class.	Number treated.	American.		Other nations.	
		White.	Black.	White.	Black.
Pay cases.....	100	2	.....	31	67
Charity cases.....	1,314	2	.....	92	1,220
Total.....	1,414	4	.....	123	1,287

TABLE XVI.—SANTO TOMAS HOSPITAL—Continued.
DISPENSARY REPORT.

Class.	White.	Black.	Total.
Natives.....	32	665	697
Foreigners.....	45	308	353
Total.....	77	973	1,050

DISEASES TREATED.

Malarial fever.....	51
Measles.....	4
Diphtheria and croup.....	14
Influenza.....	2
Miliary fever.....	1
Dysentery.....	12
Leprosy.....	1
Erysipelas.....	1
Other epidemic diseases.....	7
Purulent infection and septicemia.....	7
Pellagra.....	3
Beriberi.....	2
Tuberculosis of the lungs.....	17
Tuberculosis of other organs.....	1
Syphilis.....	35
Soft chancre.....	23
Gonococcus infection.....	28
Cancer and other tumors of the female genital organs.....	1
Cancer and other malignant tumors of the breast.....	3
Cancer and other malignant tumors of organs not specified.....	1
Other tumors.....	1
Acute articular rheumatism.....	3
Other general diseases.....	1
Alcoholism, acute or chronic.....	12
Other diseases of the spinal cord.....	1
Paralysis without specified cause.....	1
Other forms of mental alienation.....	7
Epilepsy.....	5
Hysteria.....	1
Neuralgia and neuritis.....	5
Other diseases of the nervous system.....	2
Other diseases of the eyes and their annexa.....	16
Diseases of the ear.....	1
Acute endocarditis.....	1
Organic diseases of the heart.....	15
Diseases of the arteries.....	2
Diseases of the veins.....	6
Diseases of the lymphatic system.....	16
Diseases of the nasal fossæ.....	1
Diseases of the larynx.....	1
Chronic bronchitis.....	26
Broncho-pneumonia.....	2
Pneumonia.....	5
Pleurisy.....	11
Diseases of the teeth and gums.....	1
Diseases of the pharynx.....	20
Ulcer of the stomach.....	1
Other diseases of the stomach.....	1
Diarrhea and enteritis (under 2 years).....	9
Diarrhea and enteritis (2 years and over).....	9
Ankylostomiasis.....	35
Intestinal parasites.....	7
Appendicitis and typhlitis.....	1
Hernias, intestinal obstructions.....	11
Diseases of the anus and fecal fistula.....	2
Other diseases of the intestines.....	8

TABLE XVI.—SANTO TOMAS HOSPITAL—Continued.

DISEASES TREATED—Continued.

Other diseases of the liver	3
Bright's disease (chronic nephritis)	40
Diseases of the bladder	3
Diseases of the urethra	7
Nonvenereal diseases of the female genital organs	12
Uterine tumor	2
Metritis	13
Other diseases of the uterus	3
Cysts and tumors of the ovary	2
Salpingitis and other diseases of the female genital organs	8
Nonpuerperal diseases of the breast	1
Normal labor	91
Accidents of pregnancy	26
Acute abscess	13
Other diseases of the skin and annexa	25
Diseases of the bones	2
Diseases of the joints	15
Other diseases of the organs of locomotion	1
Congenital malformation	2
Nurslings discharged from hospital without disease	88
Senility	2
Poisoning by food	1
Other acute poisoning	2
Burns	1
Traumatism by firearms	1
Traumatism by cutting or piercing instruments	4
Traumatism by other crushing	3
Sprains	7
Fractures	10
Other external violence	11
No disease	26
Total discharges	886
Deaths	89
Remaining	439

Total number of patients treated during month..... 1,414

SURGICAL OPERATIONS.

	Number.	Died.
Amputation of digits, multiple	2	.....
Ostectomy	2	.....
Excision of maxilla	1	1
Adenectomy, cervical	3	.....
Adenectomy, inguinal, single	4	.....
Adenectomy, inguinal, double	2	.....
Adenectomy, femoral	1	.....
Herniotomy, inguinal, single	13	.....
Herniotomy, inguinal, double	1	.....
Urethrotomy, internal	2	.....
Urethrotomy, external	4	1
Hydrocele, single, radical cure	5	.....
Hydrocele, double, radical cure	1	.....
Amputation of scrotum	1	.....
Curetage uteri	6	.....
Perineoplasty	2	.....
Vaginal punctures	1	.....
Thoracotomy	1	.....
Excision of breast and axilla	1	.....
Hemorrhoids, radical cure	5	.....
Varicose veins, excision of	2	.....

TABLE XVI.—SANTO TOMAS HOSPITAL—Continued.

SURGICAL OPERATIONS—Continued.

	Number.	Died.
Gunshot wound of soft parts, operation for.....	1	.....
Plastic operation for effects of disease.....	24	.....
Laparotomy, exploratory.....	3	2
Appendectomy.....	4	.....
Cholecystotomy.....	1	1
Cholecystostomy.....	1	.....
Abscess of liver, thoraco-hepatotomy for.....	1	.....
Splenectomy.....	1	.....
Pan-hysterectomy.....	2	.....
Supravaginal hysterectomy.....	8	.....
Salpingectomy, double.....	4	.....
Salpingo-oophorectomy.....	2	.....
Ovarian cystotomy.....	1	.....
Suspensio-uteri.....	4	.....
For eutopic gestation.....	1	.....
Major operations, various other.....	1	.....
Minor operations, various.....	48	.....
Total.....	167	5

TABLE XVII.—SUMMARY OF SANITARY WORK PERFORMED AND MATERIAL EXPENDED DURING THE MONTH IN THE CANAL ZONE.

Work requests on supply department:

Grass cutting.....	21
Screening.....	5
Miscellaneous.....	8
Work requests on municipal engineering department.....	14
Work requests on other departments.....	2
Buildings inspected:	
For screening.....	1,684
For mosquitoes.....	5,352
General sanitation.....	2,273
Stores, inspections of.....	24
Restaurants, inspections of.....	12
Shops, inspections of.....	28
Garbage cans emptied.....	2,812
Pit closets, inspections of.....	550
Closets disinfected.....	636
Houses disinfected and fumigated.....	4
Rat traps in use.....	441
Rats destroyed.....	446
Sewer connections made.....	10
Number of mosquitoes destroyed in dwellings:	
Anopheles.....	1,293
Stegomyia.....	280
Culex.....	10,707
Mansonia.....	8,316
Fly-breeding places destroyed.....	3
Material expended:	
Larvacide, gallons.....	705
Crude oil, gallons.....	13,370
Kerosene, gallons.....	712

REPORT OF ROUTINE WORK DONE BY HEALTH OFFICE, PANAMA.

General sanitation:	
Linear feet of ditches cleaned and maintained.....	65,550
Linear feet of new ditches dug.....	740
Number of cubic yards of earth used in filling.....	0
Gallons of larvacide used.....	600
Gallons of crude oil used.....	4,261
Gallons of kerosene used.....	125
Square yards of pools oiled.....	365,900
Water containers treated.....	10,545
Mosquito-breeding places found (stegomyia 118).....	265
Fly-breeding places found.....	47
Flies trapped (13,000 per quart).....	20
Number of rats killed.....	1,010
Number of room disinfections made.....	19
Square feet of vegetation removed.....	274,100
Garbage collection:	
Number of loads of garbage removed to dump.....	4,540
Number of cubic yards of garbage removed to dump.....	8,783
Total number of cans garbage emptied.....	42,679
Buildings:	
Number of buildings inspected.....	4,484
Number of plans for new buildings approved.....	19
Number of permits issued for repairs to old buildings.....	84
Total building permits issued.....	103
Number of buildings condemned.....	6
Number of stables condemned.....	0
Number of buildings demolished.....	3
Street cleaning:	
Average number of square yards of streets cleaned daily.....	600,000
Average number of square yards of streets sprinkled daily.....	45,000
Number of private properties cleaned during month.....	0
Number of notices served and nuisances abated.....	391
Vaccinations:	
Number of vaccinations performed during month.....	0
Total number of vaccinations since Apr. 1, 1914.....	24,880

MONTHLY WORK REPORT FOR COLON-CRISTOBAL-MOUNT HOPE.

Sanitation, Colon-Cristobal:	
Square yards street cleaned.....	4,050,652
Square yards alleys maintained.....	676,000
Number of private properties cleaned.....	776
Doses of quinine issued.....	4,304
Number of rats caught.....	524
Loads of yard garbage disposed of.....	627
Number of cans garbage (cubic yards, 2,680).....	66,485
Linear yards of ditches constructed (cubic yards, 310½).....	1,225
Acres of vegetation removed—	
Quarantine station.....	5
Cristobal (Panama R. R. reservation).....	20
Radio station.....	1
Panama R. R. reservation, Colon (swamp).....	30
Square yards oiled.....	53,210
Number of receptacles treated.....	37,870
Number of mosquitoes caught in Colon Hospital screens—	
Anopheles.....	9
Culex.....	2,470
Number of mosquito-breeding places destroyed.....	2
Number of fly-breeding places destroyed.....	2
Number of buildings inspected.....	10,191
Number of gallons of larvacide used in Colon.....	74.26
Number of gallons of crude oil used in Colon.....	1,025
Number of nuisances abated.....	370
Building, Colon:	
Number of building plans approved.....	5
Number of permits to occupy issued.....	9
Number of permits to repair issued.....	49
Number of bills collected.....	154

Sewers, Colon:	
Number of new connections made during the month.....	12
Total number of connections made to date.....	1,359
Outstanding permits.....	39
Sanitation, Cristobal:	
Number of cans garbage (cubic yards, 745).....	14,588
Loads of yard garbage handled.....	206
Square yards oiled.....	4,960
Number of receptacles treated.....	6,900
Gallons of larvacide used.....	7
Gallons of crude oil used.....	175
Number of buildings inspected.....	1,140
Number of nuisances abated.....	51
Sanitation, Mount Hope:	
Number of cans garbage (cubic yards, 109).....	896
Square yards oiled.....	123,500
Number of doses of quinine issued.....	374
Number of receptacles treated.....	12,350
Number of mosquito places destroyed.....	100
Number of mosquitoes caught in barracks—	
Anopheles.....	35
Culex.....	4,440
Number of mosquitoes caught in silver married quarters—	
Anopheles.....	2
Culex.....	714
Number of mosquitoes caught in steamships—	
Anopheles.....	3
Culex.....	20
Number of mosquitoes caught in Mount Hope village—	
Anopheles.....	59
Culex.....	261
Number of mosquitoes caught in Camp Baird cars—	
Anopheles.....	2
Culex.....	297
<hr/>	
Total anopheles.....	98
Total culex.....	5,732
Gallons of crude oil used.....	1,435
Linear yards ditches constructed.....	1,240
Linear yards ditches maintained.....	6,690
Square yards of vegetation removed.....	326,055
Number of burials during the month.....	56

TABLE XVIII.—CONSOLIDATED REPORT OF QUARANTINE TRANSACTIONS AT THE PORTS OF BALBOA-PANAMA AND COLON-CRISTOBAL.

Number of vessels inspected and passed.....	232
Number of vessels held in quarantine.....	20
<hr/>	
Total number of vessels entered.....	252
<hr/>	
Number of special inspections made to enforce compliance with anti-plague and mosquito-breeding regulations.....	109
Number of vessels fumigated on arrival.....	18
Number of vessels detained but sailed in quarantine.....	9
<hr/>	
Number of crew examined.....	13,856
Number of stowaways examined.....	6
Number of passengers examined.....	3,077
<hr/>	
	16,939
<hr/>	
Number of supplementary examinations.....	3,340
<hr/>	
Number of persons vaccinated at port of arrival because of compulsory vaccination law.....	220
Number of persons vaccinated at port of departure or en route because of compulsory vaccination law.....	1,175
<hr/>	
	1,395
<hr/>	

Number of persons held in quarantine at the detention houses to complete period of incubation of yellow fever and plague.....	324
Number of poliomyelitis suspects detained.....	18
Number of persons held in quarantine on board vessels.....	2,033
	<u>2,375</u>
Total number of persons landed from foreign ports:	
Cabin.....	1,932
Steerage.....	1,145
	<u>3,077</u>
Total number of persons embarked for foreign ports:	
Cabin.....	1,388
Steerage.....	1,135
	<u>2,523</u>
Total number of persons arriving from coast towns on small launches and sailing craft.....	1,560
Total number of persons sailing for coast towns on small launches and sailing craft.....	1,362
Apparent increase for month from coast towns.....	198
Apparent increase for month from foreign ports:	
Cabin.....	544
Steerage.....	10
	<u>554</u>
Number of clearances issued.....	54
Number of bills of health issued or viséed.....	240
Number of inspections of docks.....	3
Number of inspections of vessels at docks.....	3
Number of immigrants rejected and deported.....	23
Total number of persons landed.....	4,637
Less number for Pacific ports.....	276
	<u>4,361</u>
Total number of persons sailing.....	3,885
Apparent increase for month.....	476

IMMIGRATION REPORT FOR COLON AND CRISTOBAL.

From—	Cabin.	Steerage.
Europe.....	5	11
United States.....	749	244
Jamaica and West Indies.....	86	331
Venezuela.....	8	4
Colombia.....	74	103
Cuba.....	49	14
Costa Rica.....	124	32
Bocas del Toro.....	79	204
Coast towns.....		164
	<u>1,174</u>	<u>1,107</u>
Grand total.....		<u>2,281</u>
Men.....		954
Women.....		599
Children.....		326
United States troops.....		238
Unclassified.....		164
		<u>2,281</u>

QUARANTINE TRANSACTIONS AT THE PORT OF BOCAS DEL TORO,
PANAMA.

Number of vessels inspected and passed.....	22
Number of crew inspected and passed.....	1,359
Number of passengers inspected and passed.....	279
Number of passengers, in transit, inspected and passed.....	96

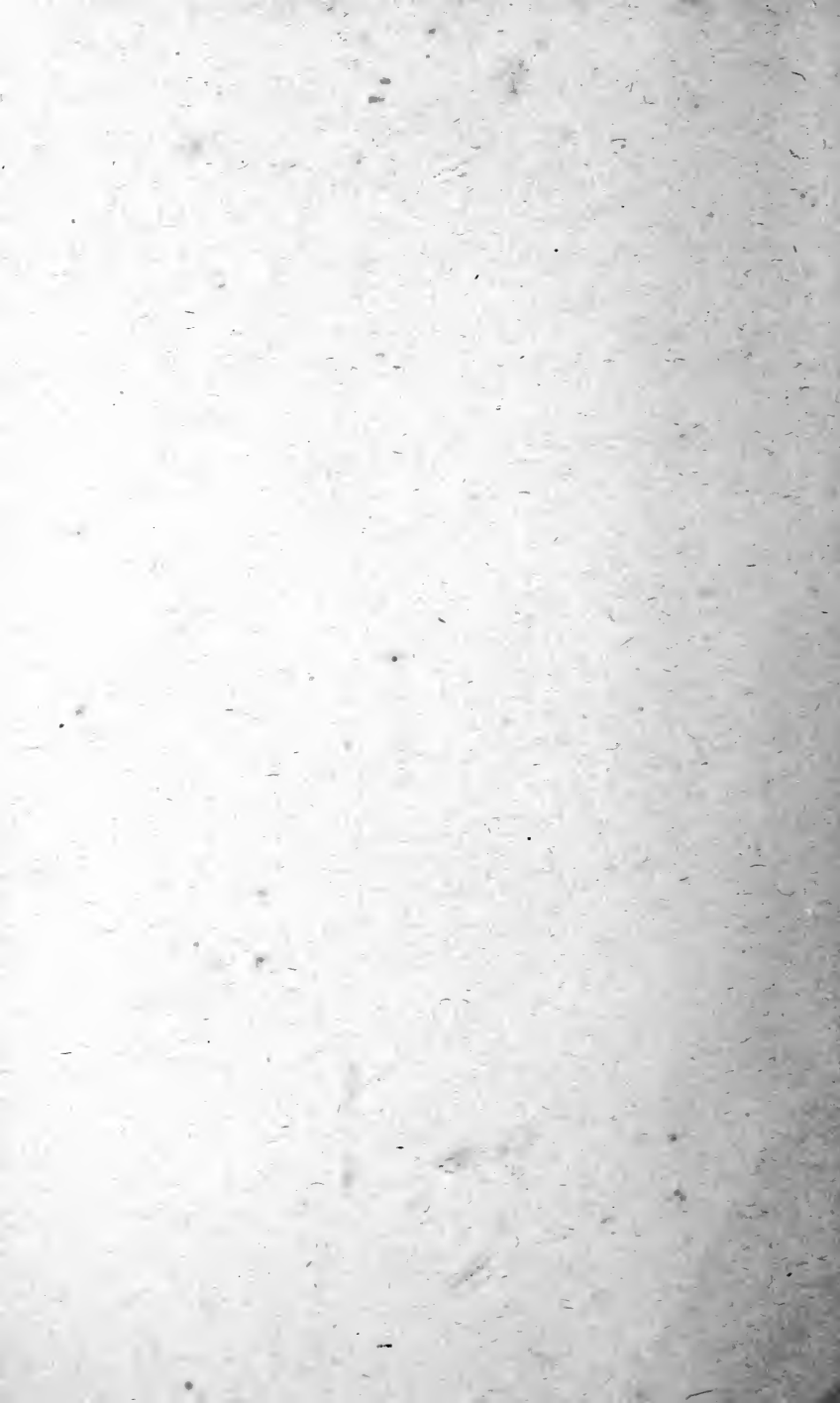
No quarantinable disease has appeared in this port, and the health conditions of the port and surrounding territory are good.

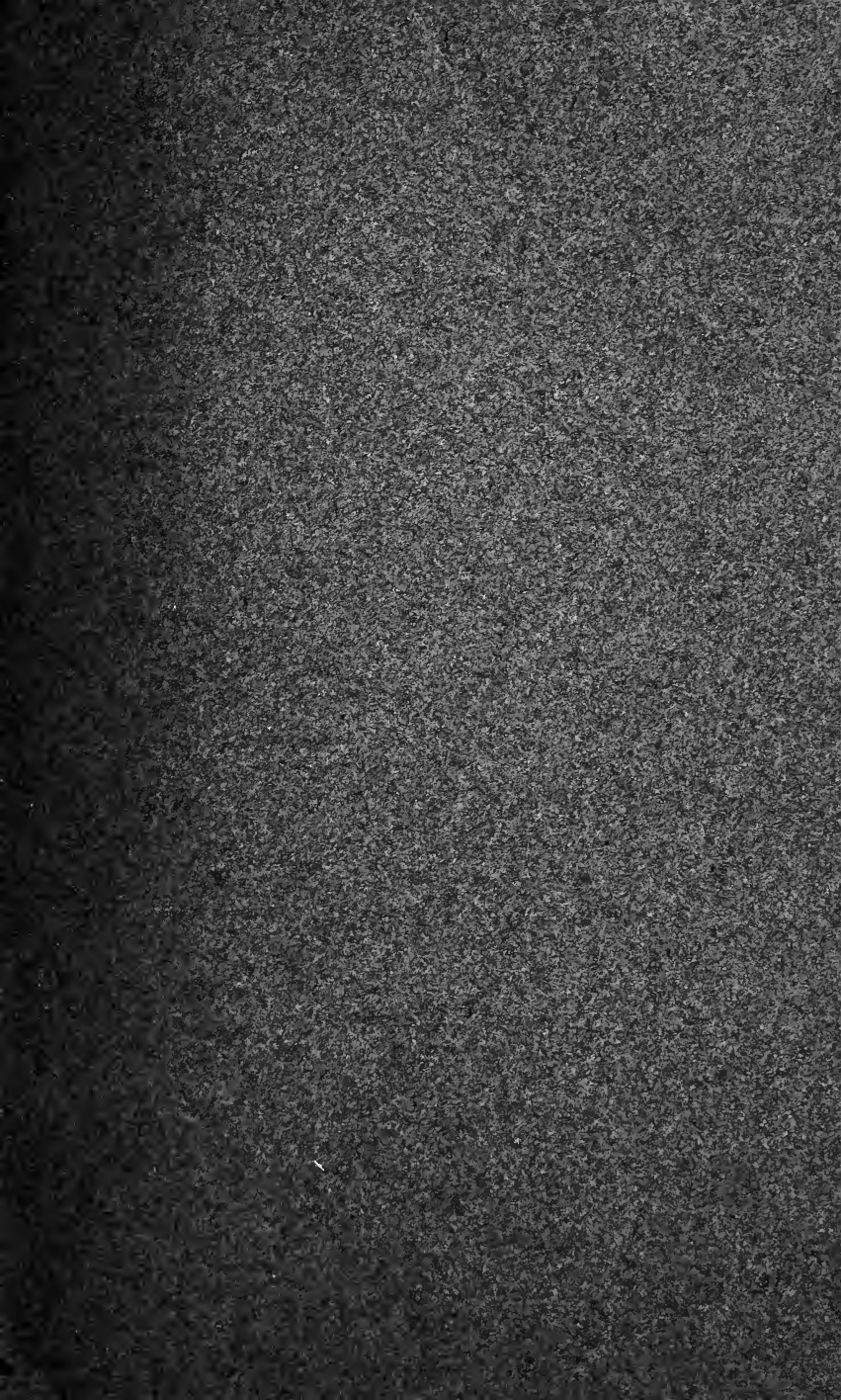
TABLE XIX.—STATEMENT OF QUININE ISSUED.

Quinine sulphate (kilos)	14.00
Pounds avoirdupois.....	30.85

TABLE XX.—PERSONNEL REPORT.

	October, 1916.			September, 1916	October, 1916.
	Gold employees	Silver employees.	Total employees.	Total employees.	Total employees.
Chief health officer.....	4	.....	4	5	4
Medical storehouse.....	4	4	8	8	10
Quarantine division.....	12	34	46	46	44
Health office, Panama.....	12	140	152	159	181
Health office, Colon-Mount Hope.....	9	151	160	166	192
Ancon Hospital.....	123	244	367	365	340
Colon Hospital.....	15	26	41	42	36
Santo Tomas Hospital.....	6	.....	6	6	6
Palo Seco Leper Asylum.....	2	33	35	37	25
Zone sanitation.....	7	117	124	126	135
Hospital farm.....	2	49	51	65	51
Dispensaries:					
Balboa.....	5	3	8	8	6
Corozal.....	.....	.....	.....	.....	4
Gamboa.....	1	.....	1	2	1
Gatun.....	2	2	4	4	4
Naos Island.....	1
Paraiso.....	2	2	4	4	4
Pedro Miguel.....	2	1	3	3	3
Total.....	208	806	1,014	1,046	1,030





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